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**REMARKS**

This amendment is responsive to the second office action dated August 23, 2004.

Applicant expresses its appreciation for the allowance of claim 9 and the indication of allowability of claims 5, 6 and 8.

By this amendment, the claims under examination have been revised in accordance with the suggestion of Examiner, and Claims 1 and 7 have been amended to define the invention with greater particularity. It is believed that the amended claims avoid the cited prior art and are in condition for allowance.

**CLAIM SUMMARY.** Claims 1-16 were in the application. By this amendment, claims 1 and 7 have been amended. Claims 2-4, dependent directly or indirectly, from claim 1 remain in the original form. Claim 5, formerly dependent from dependent claim 2, has been rewritten in independent form to include all the limitations of original claims 1 and 2. Claim 6 remains dependent on claim 7. Claim 8, formerly dependent from claim 7, has been rewritten in independent form. Claim 9 stands allowed. Claims 10-16 stand withdrawn from consideration due to the division requirement.

**THE DIVISION REQUIREMENT.**

Examiner declined to withdraw the restriction requirement traversed by applicant. Further, Examiner appears to require applicant to cancel the withdrawn claims, and cites MPEP 821.01 in support of that requirement. However, in so doing, Examiner may have overlooked a limitation prescribed in that section of the MPEP, which is believed to nullify the foregoing requirement. Applicant's review of the cited section of the MPEP permits an Examiner to insist on cancellation of the withdrawn claims only as part of a final office action; and the present office action is clearly designated non-final. Accordingly, in order to preserve the right to petition at least temporarily, applicant respectfully requests that any cancellation of the withdrawn claims be postponed until either the application is otherwise found to be in condition for allowance or the issuance of a final office action.

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## THE PRIOR ART REJECTIONS

Claims 1-4 and 7 were rejected under 35 U.S.C. 102(e) as anticipated by Polis et al. The Patent Office reasons that the claims describe the structure of the Polis device, as found, as example, in applicant's claim 1, even though Polis does not and is not used to support an electrically conductive trace in a microelectronic module, and even though the Polis device does not possess or teach the physical characteristic specified in claim 1, specifically "*said first side surface (of the substrate) possessing a physical characteristic more favorable to adherence of a conductive trace for conduction of RF current than is said second side surface and said second side surface possessing a physical characteristic more favorable to adherence of conductive trace for conduction of DC current than is said first side surface.*" Applicant respectfully traverses the rejection.

Applicant refers to the lengthy discussion of the Polis patent presented in the remarks to the amendment filed June 18, 2004, which is incorporated herein by reference. Polis doesn't show or teach a substrate, but an adhesive for a lamp, which are entirely different categories of product. In response to applicant's assertion that the Polis patent, directed to an adhesive for an electric lamp, is non-analogous art, the Examiner reasons that the claim recitations are insufficient to remove the lamp adhesive art as prior art, and that the claims fail to recite no such device, module, or conductive trace. Applicant disagrees with Examiner's position.

Applicant refers Examiner to the discussion of Polis presented in the prior amendment submitted June 18, 2004, which should refresh examiner's memory. Implicit in the Patent Office reasoning is the position that the Polis patent would be considered non-analogous if the claims recited any of a device, module, or conductive trace. Accordingly, by this amendment, applicant has amended both independent claims 1 and 7 to positively recite a conductor. Claim 1 now recites a first conductive trace adhering to said first side surface for conduction of RF current; and a second conductive trace adhering to said second side surface for conduction of DC current. Claim 7 now recites a first thin film conductor adhering to said first side surface for

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conduction of RF current; and a second thin film conductor adhering to said second side surface for conduction of DC current.

Applicant submits therefore that Polis should be removed thereby as non-analogous art and the rejection of the claims over Polis should be reconsidered and withdrawn.

In the remarks presented applicant's earlier amendment, dated June 18, 2004, applicant argued further that the Polis patent was inapplicable because the structure therein being asserted as described by the claim was an intermediate or transitory stage in the manufacture of the Polis product, and, not on its own a product. Specifically, applicant argued that Fig. 3 of Polis is not a product at all, but is a transitional assembly of the product of Fig. 6. In the stage of manufacture represented in Fig. 5, Polis states that the filler material particles of the components migrate together. That the filler material particles of the components and those of the adhesive are substantially indistinguishable. As stated at col 6, line 36 + the figure shows the filler material after sintering and states that the filler material particles have coalesced and formed relatively large interlinked crystals 610, and that the component filler material and the adhesive filler material remain indistinguishable and form a single solid part. See Polis Col 5 lines 49-54, which concludes: the **"filler material particles fuse together to create a completed homogeneous part"** (emphasis added).

The current rejection fails to answer applicant's criticism regarding the use of a transitory structure, a mere stage (e.g. a non-product) in the manufacture of a different product, as prior art to a claim that recites a product of manufacture, such as applicant's claims 1 and 7. Applicant respectfully submits that the patent law does not permit the transitory structure of Polis to anticipate or render obvious the subject matter of claims 1 and 7. Instead, Examiner considered only the elements noted in applicant's argument and directly contradicts the express teaching of the Polis patent with respect to those elements by stating that *"Nowhere in Polis discloses the fused components become a completed homogenous part. The fact that two different amount filled components bonded together does not necessar(ily) become a homogenous layer."* Applicant submits the Examiner's statement is factually incorrect. Polis says it is homogenous

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and examiner says it is not. Is examiner permitted to throw away the parts of prior art patents that don't seem to fit examiner's position on obviousness.

Claims 2-4 depend directly or indirectly from claim 1 and included all of the limitations in claim 1. Therefor those claims should be allowable for the reasons advanced in connection with the foregoing discussion of claim 1.

For all of the foregoing reasons applicant submits that Claims 1-4 and 7 are not and cannot be anticipated by the patent to Polis. Accordingly, applicant respectfully requests the Patent Office to reconsider and withdraw the rejection.

**Claims 1-4 and 7** were also rejected under 35 U.S.C. 102(b) as being anticipated by Baccini. The rejection reasons that Baccini discloses a multi-layer "green tape" circuit board, with circuits formed on one or both surfaces of the green tape foils, citing col. 1, lines 15-18, that the green tape is formed on alumina and solvents, and that two green tape foils that have "*analogous material*" are bonded together by melting action citing col. 1 lines 15-17 and col. 2, lines 27-30 of Baccini in support. This rejection is respectfully traversed.

Reference is made to the discussion of the Baccini patent presented in the remarks to the amendment filed June 18, 2004, which is incorporated herein by reference. Applicant believes that Examiner again has misinterpreted the content of the Baccini patent in an attempt to reconstruct that reference by hindsight reconstruction based on the applicant's disclosure. Col. 1 lines 15-17 of Baccini is the first paragraph of the discussion of the "Prior Art" to Baccini. The paragraph states: "*The hybrid circuits of the so-called green-tape technology consist of thin foils of alumina in the raw state or of another like or analogous material, which have a printed circuit on one or both of their surfaces.*" The reference to "*another like or analogous material*" is to some material that in the "raw state" behaves like alumina (aluminum oxide). Barium oxide would be the first alternative ceramic candidate chosen. There are obviously other ceramic materials as well. But that vague reference to other ceramics by the Baccini patent cannot rise to the level of the composite structure defined in claim 1, specifically, the recitation of: "*said first side surface possessing a physical characteristic more favorable to adherence of a conductive trace for conduction of RF current than is said second side surface and*

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*said second side surface possessing a physical characteristic more favorable to adherence of conductive trace for conduction of DC current than is said first side surface*" as recited in claim 1 or *"said first surface being of a ceramic composition that is optimal in physical characteristic for bonding to a thin film conductor and said second surface being of a composition that is optimal in physical characteristic for bonding to a thick film conductor, said latter composition being different than said former composition"* as recited in claim 7. The mere fact that the reference makes vague mention of alternative materials of which there might be thousands or more does not permit one to assume or infer that the particular material set forth in applicant's claims 1 and 7 is contained within that broadly defined group.

Further, col. 2 lines 27-30 of Baccini, relied on in the rejection, states: *"Thus by heating the zones of a green-tape foil to be bonded and by superimposing another green tape foil, the two green-tape foils adhere to each other by the melting action."* The meaning of the term "zones" therein is found in col. 2 lines 61-66, which states: *"At least two zones of a first green-tape foil 10a are suitable heated by suitable heating means, which are not shown here, so as to obtain two welds, which in this example are spot welds 11. These spot welds 11 are obtained by melting the solvents contained in the alumina which constitutes the green-tape foil 10a."*

In short, Baccini is attaching the multiple layers together by means of spot welds at specific locations 11. The layers are not fused together. Claims 1 and 7, as amended, however, specify that the module substrate contains multiple layers that are fused together. See paragraph 0038 of applicant's specification. Accordingly, for that additional reason applicant submits that Baccini cannot anticipate or render obvious the subject matter of claims 1-4 and 7. Accordingly, applicant respectfully requests the Patent Office to reconsider and withdraw the rejection.

Claims 5, 6 and 8 were objected to as being dependent on a rejected base claim but were indicated as being directed to allowable subject matter and would be allowed if rewritten in independent form. By this amendment, the claims have been rewritten. Accordingly applicant submits that claims 5, 6 and 8 are now in condition for allowance.

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It is believed that the foregoing amendment places the application in condition for immediate allowance. Accordingly, applicant respectfully requests an early notice of allowability.

CLAIM SUMMARY.

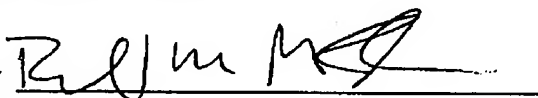
Claims 1-16 were in the application as filed. Of those claims, claim 9 stands allowed, claims 5, 6 and 8 were indicated as allowable, claims 1-4 and 7 remain present for examination and claims 10 -16 stand withdrawn from consideration.

ADDITIONAL CLAIM FEES

The number of claims as originally filed in total remains below twenty. The number of independent claims has increased by two. Accordingly, an additional claim filing fee of \$176.00 is due. A credit card authorization in the foregoing amount accompanies these papers in payment of the foregoing fee.

Respectfully submitted:

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